x_n = the probability that a network series will be successful enough to make it into syndication.

x_S = the probability that a new first run syndicated program will generate revenues large enough to warrant renewing it for a second season.

R_n = syndication revenues net of distribution costs received by the supplier of a syndicated off-network series.

R_S = syndication revenues net of distribution costs received by the supplier of a first run syndicated program.

L = the network license fees earned by a successfully syndicated network program.

D_n = cumulative production deficits (license fees minus production costs) for a representative network series that isn't syndicated.

D_S = the deficit (supplier's revenues minus production costs) for a first run syndicated program that does not do well enough to warrant renewal after its first year.

Long run financial viability for a supplier of prime time network programs requires that the following relationship be satisfied:

Equation (III.1) $$R_n \geq P_n - L + (1-x_n)D_n/x_n + F_n/x_n$$

That is, if suppliers are to sustain their operations in the long run, on average the net revenues earned by programs that make it to syndication must cover any deficits incurred during their network runs plus any deficits incurred on programs that get on the network but don't make it to syndication, plus any deficits incurred from the upfront development costs for all programs.[34]

It is useful to distinguish this long term network supplier viability condition from two shorter term viability conditions. Long term viability doesn't

[34] With a probability of making it into syndication of x_n, the probability that a network program isn't syndicated is $1-x_n$. The ratio of shows not syndicated to shows syndicated is $(1-x_n)/x_n$. A successful program must also cover its own development costs plus the development costs of $(1-x_n)/x_n$ programs that don't make it into syndication. F_n plus $F_n(1-x_n)/x_n = F_n/x_n$.

require that each network program successful enough to be syndicated satisfy **Equation (III.1)**; only that it be satisfied on average and in the long run. Break-even for the individual program on a network simply requires that network license fees plus eventual syndication earnings cover its own production costs. Covering its production cost is not a prerequisite for syndicating a network program, however, because by this time these costs are sunk. An off-network program is viable in syndication if its syndication revenues are sufficient to cover its distribution costs. In other words, viability in syndication for a series that has already been produced requires only that R_n not be negative. Finally, it should be noted that the size of R_n is determined by competition from other programs, both first run and off-network, in the market for syndicated programs and by regulations governing that competition, such as the Prime Time Access Rule.

Basic structural considerations suggest that the industries supplying programs for the networks and for first run syndication are highly competitive. In both cases concentration is low and frequent entry and exit suggests that entry is easy.[35] Therefore we would expect **Equation (III.1)** to hold as an equality for the marginal supplier of network programs.

Equation (III.1) makes quite clear the interest of the networks in repealing the off-network provision of PTAR. If the supply of programs is competitive, a substantial portion of any increase in R_n that might materialize from eliminating the off-network provision would be passed through to the networks because program suppliers would offer lower license fees in their competition for slots in network schedules.

A similar relationship to that of network suppliers describes the situation of suppliers of first run syndicated programs. Long term viability requires that:

Equation (III.2) $$R_S \geq P_S + (1-x_S)D_S/x_S + F_S/x_S.$$

[35] Owen, B. and Wildman, S., Video Economics, Harvard University Press, 1992, pp.54-60.

As with prime time network programs, the condition for an individual program to be viable on an ongoing basis is less restrictive. A program already in production is viable if net revenues to the supplier are large enough to cover production costs, i.e., $R_S > P_S$. As with R_N, the size of R_S is determined through competition in the market for syndicated programs and is affected by regulations, such as PTAR, that influence that competition. Unlike an off-network program, a first run program is not viable in syndication if its revenues just cover its distribution costs, because new episodes must be produced continually.

To see what would happen if prime time access period competition between off-network and first run syndicated programs was made possible by elimination of the off-network provision of the Prime Time Access Rule, we need to look at the price competition that would develop between first run and off-network programs. To do this we employ the approach to modeling competition among program suppliers set out in Besen et al (1984).[36] The key insight of the Besen model is that the schedule of prices paid for programs is constrained by the difference between revenue generated net of distribution costs and opportunity cost for the best program not taken, where that program's opportunity cost is its highest value in its next best alternative use.[37]

The following example illustrates the intuition underlying this analytical approach. Consider two programs competing for clearance on a television station. One program would generate annual advertising revenue of $200,000 and the opportunity cost to the program supplier of making it available is $50,000. The second program would generate revenue of $250,000 and has an opportunity cost of supply of $60,000. Because the maximum net gain over opportunity cost is higher for the second program, economic logic suggests that the station and the supplier of the second program should be able to agree on

[36] Besen, S.M., Krattenmaker, T.G., Metzger, A.R., Jr., and Woodbury, J.R., Misregulation Television: Network Dominance and the FCC, University of Chicago Press, 1984.

[37] A program's opportunity cost would be its earnings on the most profitable alternative vehicle to the station in question. If there are no other outlets, the opportunity cost would be the cost of distribution for an off-network program, the cost of distribution plus the cost of new episodes for an established first run syndicated program, and the cost of distribution plus the cost of episodes and upfront costs for a prospective new first run program.

mutually beneficial terms that, from the station's perspective, can't be matched by the supplier of the first program. Bidding by the suppliers of the two programs will produce just this result. Each will try to best the other by offering the station a lower license fee (or equally valuable combination of license fee plus advertising time) until one of the suppliers has to withdraw because the license fee required to offer the station a better financial package than the other supplier is less than its opportunity cost. The best deal the supplier of the first program would offer the station is a license fee of $50,000, which would give the station a profit of $150,000. However, any license fee for the second program of less than $100,000 and more than $60,000 will enable the station to earn more than $150,000 and the second program's supplier to earn more than its opportunity cost of $60,000. How the difference between $100,000 and $60,000 will be split between the two parties will be determined by the comparative bargaining skills of the program supplier and the station.

Now consider the opportunity costs of off-network programs, well-established first run programs and new first run programs, the three types of programs that would be competing for prime time access period clearances on network affiliates in the top 50 markets if the off-network provision of PTAR were dropped. The opportunity cost of a prospective new first run program is all of the costs that must be covered in the long run identified in **Equation (III.2)** -- that is distribution costs and ongoing production costs plus upfront development costs appropriately weighted by the likelihood of success. For a first run program with the costs of development behind it, the opportunity cost of supply is smaller -- just the cost of producing new episodes plus distribution costs. For an off-network program with its episodes in the can, the opportunity cost of supply is just distribution costs alone.

Now consider the best off-network program not taken in a market and suppose that if shown in the prime time access period it would generate advertising revenue of A. If supplied for a license fee just sufficient to cover its distribution cost, a station would realize a profit of A-d, where d is the distribution cost. To get clearance, any other program must offer the station at least A-d. For any other off-network program, this requires ad revenues of A or

more. For an established first run program, the hurdle is higher because it must also cover its production costs. To remain on the station, an established first run program must generate revenues of at least $A+P_S$. The highest hurdle of all is faced by a program supplier considering the production of an entirely new program for the access period. To financially justify producing a new first run program, the producer would have to have a reasonable expectation of being able to generate ad revenue of at least $A+P_S+(1-x_S)D_S/x_S+F_S/x_S$.

Clearly, since ad revenue is a function of audience size, competition between off-network programs and first run syndicated programs requires that first run suppliers provide stations with more popular programs than do off-network suppliers if they are to win station clearances. How much more popular is a function of the magnitude of the extra costs first run producers have to cover in syndication earnings. This raises the troubling possibility that the elimination of PTAR's off-network provision will result in first run programs being displaced by off-network programs that viewers don't like as well. This would not be a matter of much concern if the extra costs that must be covered by syndicators of first run programs were trivial in magnitude or if off-network programs were generally more popular than the best first run programs. The evidence, which is reviewed below, suggests just the opposite. The production costs and upfront costs of first run production are large and the risk of failure is high. Furthermore, the most popular syndicated programs are first run.

3. The cost of quality first run syndicated shows for the access period is about the same as a network sitcom

The analysis of **Section IV.B.1** showed that the production costs and upfront costs that must be built into first run suppliers' offers to television stations produce a bias on the part of stations in favor of off-network programs that are less popular with viewers. The magnitude and significance of that bias is an empirical issue. This section draws on a combination of proprietary and public data to develop estimates of the magnitudes of upfront costs, costs incurred on a per episode produced basis, and the degree of risk associated with the supply of first run syndicated programs for the access period.

While it is common to dismiss first run programs as inexpensive, the annual production budget for a typical first run prime time access period program is comparable to that for an "expensive" prime time network half hour program. The average annual production cost for first run series targeted for the access period in proprietary data supplied by Paramount and King World was $17.7 million in 1994. By contrast, the annual budget for a prime time network sitcom probably runs in the neighborhood of $13 million to $15 million.[38] Each first run episode is less expensive than its network counterpart, but there are a lot more of them. Whereas the networks typically commission 22 to 24 episodes a year for a prime time situation comedy, 175 to 195 episodes per year are typical for game shows while up to 260 episodes may be produced annually for magazine programs.

Episode-specific promotions, although considerably smaller in magnitude than production costs, also distinguish certain types of first run programs -- magazine shows and talk shows in particular -- from off-network programs. Celebrities, special events, and dramatic situations are the primary draws for these types of programs, and it is critical to success to advertise these guests in advance. Ongoing advertising and promotions ranged from $2.5 million per year to several times this amount according to proprietary data supplied for King World and Paramount programs.[39]

For first run programs, up front costs are dominated by development and promotion. First run programs do not spring full blown from the heads of producers. New concepts are explored, elaborated, tested, and trialed before a few are selected for the production of the pilot programs that are used in attempts to sell new programs to stations. Pilots themselves may cost from $250,000 to $500,000 to produce, and for each pilot produced a studio will have spent more money in the process of developing the concept to the pre-pilot stage

[38] Networks typically commission 22 to 24 episodes annually for established situation comedies. This estimate assumes an average budget of $600,000 per episode for network situation comedies, based on the average figure of $571,000 for 1989 reported in Owen and Wildman (1992).

[39] Promotional budgets are considerably less for off-network programs because they are less dependent on topical or per episode appeal.

and culling through other prospective program concepts that didn't make it that far.

Promotion is another up front expense, which, while a factor for off-network programs as well, weighs more heavily on the producers and distributors of first run programs. The cost of establishing the name recognition and awareness required to get a new syndicated program off to a successful start is considerably higher for a first run program than for an off-network program because several years of prime-time national exposure on a major network creates visibility and name recognition for off-network programs that even very large promotional budgets cannot duplicate for first run shows. To pre-launch promotional expenses must be added the substantial cost of fine tuning programs cleared by enough stations to warrant production. According to a recent Electronic Media article, it can cost as much as $50 million annually to launch an access period magazine program.[40]

Table IV.4 gives some indication of the total cost through the first year on air of the direct costs of launching a representative access program. A range is indicated for cost categories in which the underlying data are not precise enough to calculate means.

The analysis of first run costs could stop here if the success of new first run programs was guaranteed. However, for first run programs, as with other video entertainment investments, success is far from certain. Of all the first run programs offered for sale, considerably less than half are picked up by enough stations to warrant committing the substantial budget required for a first year's production. Even then the majority of new first run programs fail and a substantial portion of their production costs are effectively lost. An analysis of 109 first run half hour strips offered for syndication from the 1988-1989 season through the 1993-1994 season showed that only 39 percent were picked up by enough stations to warrant syndication and only 29 percent of the 39 percent picked up saw a second season (see **Table IV.5**). Calculated from the date of their formal presentation at NATPE to the beginning of a second season, the

[40] Thomas Tyrer and Wayne Wally, "Distributors Size Up The Daypart Battles: Daytime Appears To Be Where Action Will Be," Electronic Media, January 23, 1995, p.4.

Table IV.4: Total Costs Through First Season for First Run Access Period Programs	
Cost Category	**Amount** (Million Dollars)
Annual Ongoing Costs	
Production	17.700
Promotion	2.500 - 8.000
Upfront Costs	
Pilot	0.250 - 0.500
Pre-pilot development	1.000
Post-Pilot Promotion and Development	3.000 - 8.000
Total	24.500 - 35.200
Source: Proprietary data for King World and Viacom.	

survival rate for new first run syndicated half hours was only 11 percent during this period.

There has been some confusion regarding the implications of high rates for failure for first run syndicated programs. For example, Disney has claimed that the fact that three of six programs recently launched by King World with substantial clearances on network affiliates have failed is evidence of leverage King World currently exerts in the syndication market[41]. But the reality is that high failure rates for new products are endemic to competitive video markets generally.

The majority of feature films fail to make a profit and approximately three quarters of new prime time network programs are not renewed for a second year[42], which is about the same as the 71 percent of first year first run syndicated half hours that don't see a second season. King World's fifty percent failure rate

[41] The Walt Disney Studios, PTAR Top 50 Market Access Position Paper, April 1994. See the appendix to this report for a detailed analysis of the Disney Study.

[42] Owen, Bruce M. and Steven S. Wildman, Video Economics (Cambridge, MA: Harvard University Press, 1992).

looks pretty good when compared with the industry as a whole, although one must be cautious not to infer too much from only six observations.

If a first run producer is to remain viable in the long run, the upfront costs and the unrecovered production costs of failed programs must also be covered in the earnings of programs that are successful. If only 29 percent of first run syndicated programs picked up by stations succeed, then, on average, the revenues generated by a successful program must cover its own costs plus the up front costs and unrecovered per episode costs of 2.45 failed programs. The importance of allowing for the probability of failure in assessing the long term revenue (and ratings) requirements of first run producers is reflected in a comparison of the cost data in **Table IV.4** with "expected cost" figures in **Table IV.6**, where upfront costs have been divided by the appropriate success rates (11 percent for pilot and pre-pilot development costs and 29 percent for post-pilot

Table IV.5: Frequency of Success for New First Run Half Hours

Season	Number Offered	Number Syndicated	Number Renewed for Second Year	Percent Offered Syndicated	Percent Syndicated Renewed	Percent Offered and Renewed
1988-1989	33	9	2	27	22	6
1989-1990	26	13	4	50	31	15
1990-1991	23	8	3	35	38	13
1991-1992	9	2	0	22	0	0
1992-1993	11	7	1	64	14	9
1993-1994	7	3	2	43	67	29
Average	18	7	2	39	29	11

Source: "Syndication at a Glance", Variety, annual issues.

development and promotion costs). It is also assumed that programs that fail after launch cover three quarters of their production costs. Given the absence

of solid data that would permit an estimate of the fraction of production costs recovered in the revenues of failed programs, we have employed the working assumption that 25 percent of production costs are not recovered on failed programs. The residual is also divided by the failure rate for new programs.

Table IV.6: Total Annual First Run Costs Adjusted for Risk of Failure		
Cost Category	**Amount** (Million Dollars)	**Amount Adjusted for Risk** (Million Dollars)
Annual Ongoing Costs		
Production	17.700	33.000*
Promotion	2.50 - 8.000	8.600 - 27.600
Upfront Costs		
Pilot	0.250 - 0.500	2.300 - 4.500
Pre-Pilot Development	1.000	9.100
Post-Pilot Promotion and Development	3.000 - 8.000	10.300 - 27.600
Total	24.500 - 35.200	63.300-101.800
* Adjusted for risk as 17.7 + 0.25(17.7)/0.29, where 0.25 is the share of uncovered production costs for failed programs and 0.29 is the success rate for post-pilot development and promotion costs.		

By contrast, the audience response to off-network programs entering syndication is much more predictable. The reason is that a program's rating during its network run is a good predictor of the audience it will draw in syndication.[43] [44] As a result, there is a strong and positive correlation between an off-network program's network rating and the price it commands in syndication. This relationship is clearly evident in data reported in recent studies by Disney

[43] Robinson, Karla S., "Predicting Success in syndication of Off-Network Television Programs," Unpublished Master's Thesis, Northwestern University, 1993.

[44] Wildman, Steven S. and Robinson, Karla S., "Network Programming and Off-Network Syndication Profits: Strategic Links and Implications for Television Policy," forthcoming, Journal of Media Economics, vol. 8, no. 2.

and Paramount.[45] The greater riskiness of first run programs is reflected in the much shorter term contracts stations generally sign for new first run programs than for off-network programs. Off-network programs are typically licensed for five to six years while new first run programs are usually licensed on a year-to-year basis. Shorter term contracts are used to shield producers, syndicators, and stations from some of the substantial risks of commitments to new first run programs. As successful first run syndicated programs develop track records, they tend to be renewed with longer contracts.

4. The size of the off-network economic advantage without PTAR is substantial

With this background, it is now possible to be more specific about the requirements for success in first run syndication and how these differ from the requirements for success in off-network syndication. In doing so, it is important that we distinguish between two meanings of success in first run syndication: success for an individual program and success (or survival) for a first run producer.

The minimum requirement for success for a program is that it cover its costs on an ongoing basis, which is necessary to justify keeping it on the air. For off-network programs this means primarily that the program must generate ratings (or advertising revenue) high enough to cover its distribution costs. For first run programs, success requires that ratings be high enough to generate advertising revenue sufficient not only to cover the cost of distribution but also the annual costs of production and promotion. As a result, a single first run program must generate a larger audience to be successful than that required for the success of a single off-network program.

The implications of a higher ratings threshold for success for first run programs are illustrated in **Figure IV.4**, where, for any value of r specified on the vertical axis, the schedule R gives the percentage of new first run access programs drawing audiences large enough to achieve that rating. r_d is the rating a representative first run access program would have to achieve to cover its

[45] The Walt Disney Studios, PTAR Top 50 Market Access Position Paper, April 1994 .

distribution costs and r_{d+p} is the rating needed to cover its per episode costs in addition to its distribution costs. r_{d+p} is the ratings threshold for program success. Only first run programs with ratings r_{d+p} or greater will be kept on the air substantially beyond their premieres. The schedule is drawn so that approximately 29 percent of new programs meet the program success threshold.

The need for first run programs to have higher ratings to justify keeping them on the air than is required for off-network programs is also evident in **Figure IV.4.** While first run programs with ratings below r_{d+p} cannot survive, off-network programs with ratings as low as r_d would be viable.

The distinction between program success and producer success is illustrated by r_{d+p+f} in **Figure IV.5,** which otherwise is the same as **Figure IV.4.** r_{d+p+f} is the rating successful first run programs must achieve on average if a producer of first run programs is to be viable in the long run, which requires covering the sunk costs of failed programs in addition to the distribution and per episode costs of programs that draw large enough audiences to warrant keeping them in production. The riskiness of first run production substantially elevates the ratings threshold for long term success in the syndication market above the threshold representing viability for the individual first run program, which itself is substantially higher than the rating required to keep an off-network program in syndication.

The fact that first run syndicators must cover substantial costs over and above the distribution costs of off-network syndicators means that a syndicator of a first run program with a given rating will be unable to offer television stations deals as attractive as those from a syndicator of an off-network program with equivalent ratings. While ratings are often used as a gauge of the relative values of different programs to television stations, this comparison is misleading if a first run program is being compared to an off-network program.

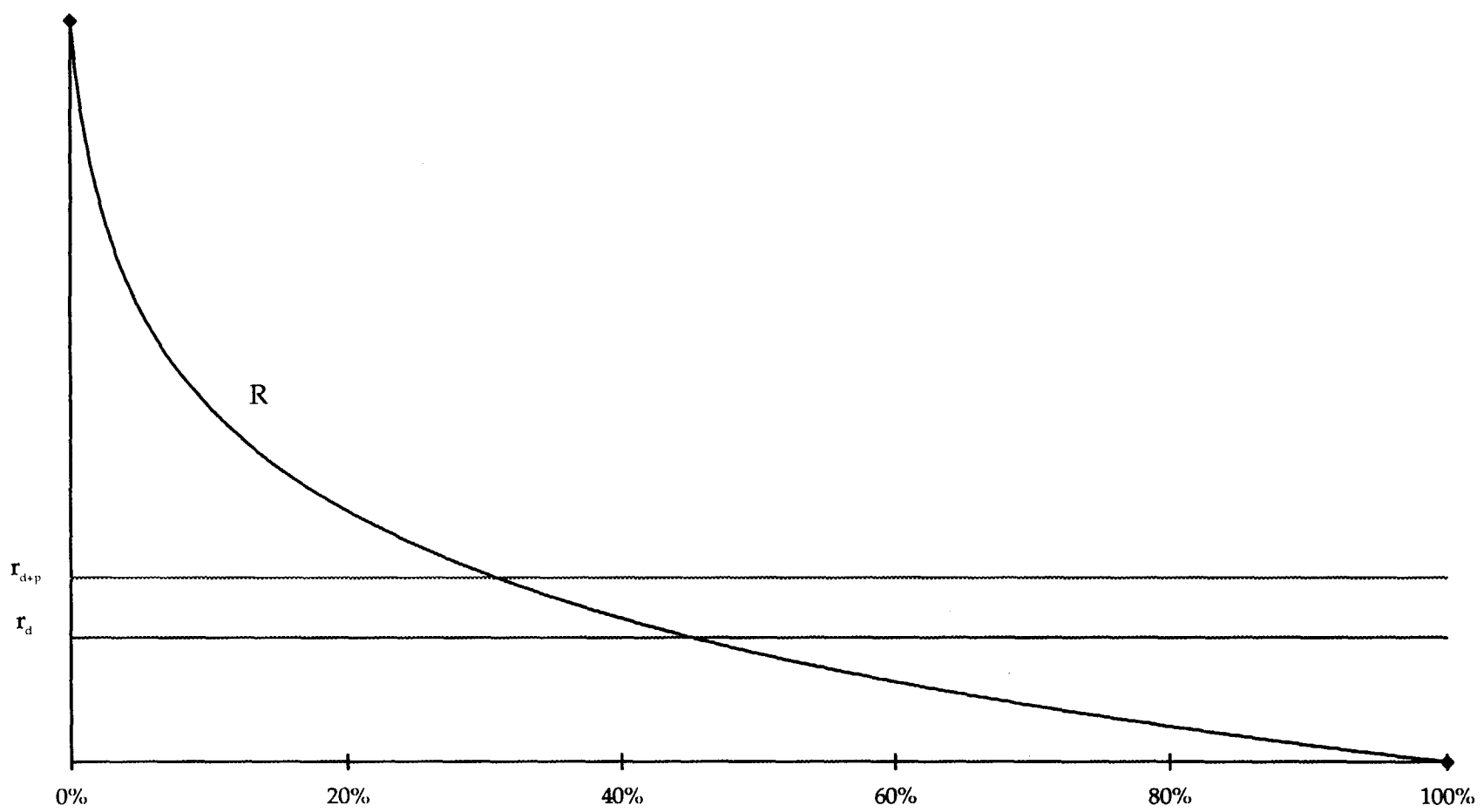
A station's primary concern is the amount of money it can earn from a program, not its rating. Because first run producers must keep a larger fraction of program generated revenues, whether by charging higher cash license fees or retaining more barter inventory, or both, on average the syndicator of an off-network program will be able to undersell the syndicator of a first run program

in the competition for station clearances if the two audiences for the two programs are the same size. Another way of stating this basic truth of syndication is that first run programs must draw larger audiences if they are to offer stations financial terms attractive enough to be competitive with off-network programs.

Using publicly available data on access program' ratings, the cost of prime time advertising time, and the estimates presented above on the costs of first run syndicated access programs, we can develop a rough estimate of the magnitude of the pricing advantage realized by off-network programs. According to the latest data from the Network Television Association, thirty seconds of prime time network commercial time sold for an average of $7.74 per thousand households delivered. With approximately 100 million television households in the United States, a national rating point is equivalent to about one million viewers. At $7.74 per thousand, a national rating point is worth $7,740 per thirty second commercial unit. Assuming that advertising time in access period programs sells at about same price as network ad time and multiplying by the 14 thirty second units that each half-hour episode program contains, each episode will generate $108,360 in advertising revenue. [46] For a stripped half hour program shown about 250 times a year, this means that each rating point is worth approximately $27 million annually. If annual program costs were at about the midpoint of the range shown in **Tables IV.4** and **IV.6** ($22.75 million), a well established first run syndicated access period program would need 0.84 rating points more than an off-network program to cover its ongoing costs. This contributes nothing to upfront costs and the costs of failed programs, however.

[46] This is probably a substantial overestimate. Among other things, a majority of the ad time in syndicated access period programs is sold by the stations at rates less than the networks' prime time rate.

Only approximately 29 percent of new programs meet the success threshold and are renewed for a second season.*



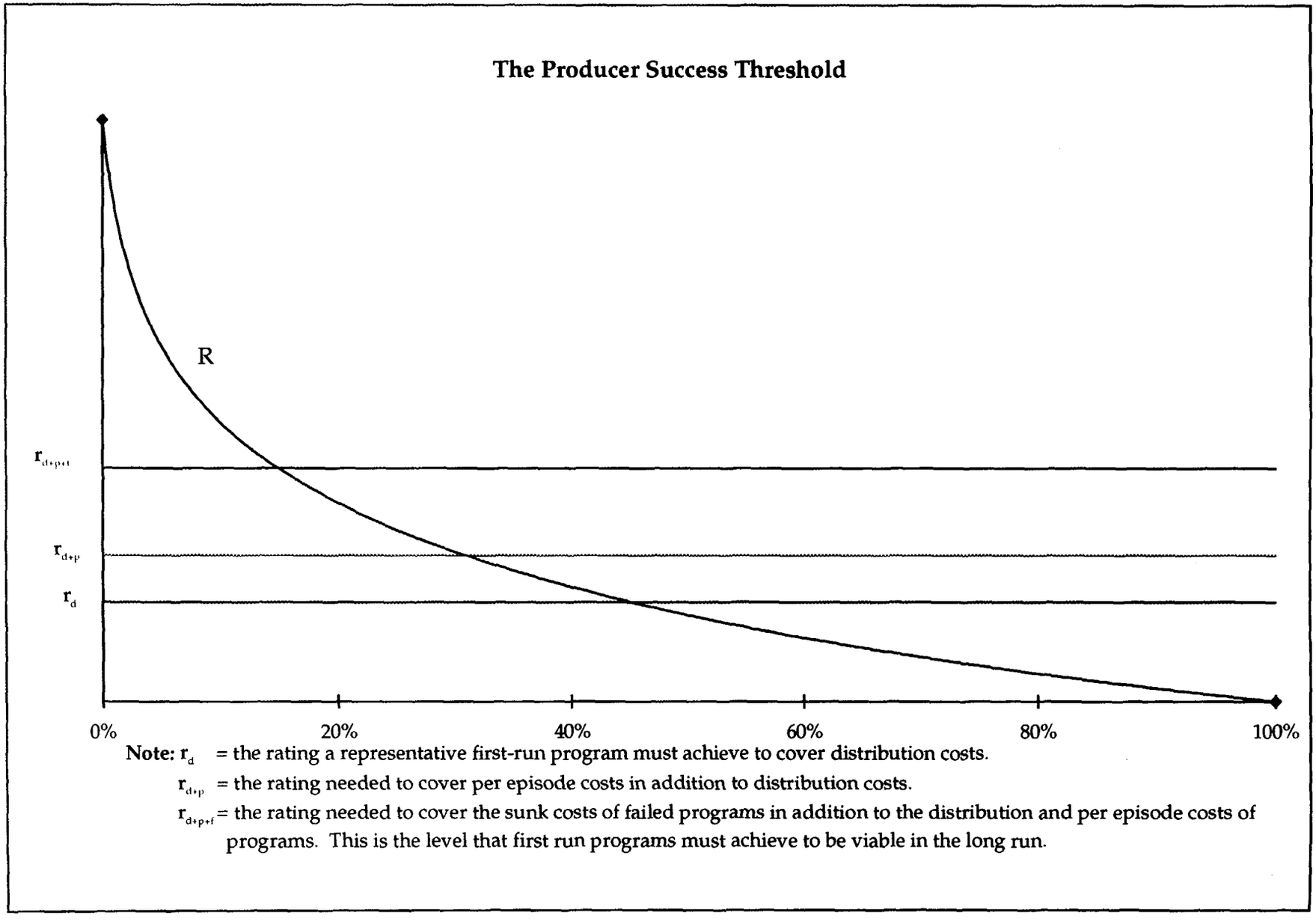
Note: r_d = the rating a representative first-run program must achieve to cover its distribution costs.

r_{d+p} = the rating needed to cover per episode costs in addition to distribution costs.

* See Table III.4.

Figure IV.4

In order to achieve long-run viability, successful programs must also cover the sunk costs of failed programs.



Note: r_d = the rating a representative first-run program must achieve to cover distribution costs.

r_{d+p} = the rating needed to cover per episode costs in addition to distribution costs.

r_{d+p+f} = the rating needed to cover the sunk costs of failed programs in addition to the distribution and per episode costs of programs. This is the level that first run programs must achieve to be viable in the long run.

Figure IV.5

Suppose a successful program stays on the air for five years on average and that risk adjusted costs are $82.5 million, which is about the midpoint of the range indicated in **Table IV.6.** Minus the approximately $23 million of first year program costs, this leaves about $59.5 million that would have to be recovered through the sale of larger audiences during the program's five year run. This amounts to about $12 million a year without discounting, or about another 0.44 rating points. So long term viability in first run syndication would require about 1.28 rating points more than is necessary for viability in off-network syndication. Stated in terms of relative audiences sizes, this disadvantage is quite substantial. To compete in the long run with off-network programs with the 7.20 average ratings found for affiliates in markets 51 through 60, a first run program would have to generate ratings of at least 8.48, which requires approximately 18 percent larger audiences.

The upshot of this analysis is that off-network programs are a serious threat to push first run programs out of the access period on network affiliates, even when first run programs are more popular with viewers. How this would affect viewer welfare and the competitiveness of the over-the-air broadcast industry is addressed below in **Section IV.B.5.**

5. The impact of repealing PTAR's off-network provision on viewers is negative; further, affiliates widen their economic gap over independents without the off-network restriction.

To determine whether the off-network provision promotes or works against viewer welfare and a more competitive broadcast marketplace, we need to assess the benefits to viewers and competition in the current environment with the off-network provision of PTAR and compare that to an assessment of viewer benefits and competitiveness in the market that is likely to emerge if the off-network provision is eliminated. We begin by assessing the likely effects of eliminating the provision on stations' choices among first run and off-network programs.

The analysis of the previous section showed that it is entirely possible that off-network programs could displace more popular first run access programs on

network affiliates in the top 50 markets if the off-network provision is repealed. A study of affiliate choices in markets 51 through 60 for 1993 suggests that there is likely to be substantial substitution into off-network programs. Our analysis for the four weeks of the month of November 1993 surveyed by Arbitron, shows that affiliates in these markets programmed 35 weekly half hours with off-network programs and 114 weekly half hours with first run programs. So off-network programs were just under a quarter of the total.

The average rating for first run programs was 12.4, compared with 7.2 for off-network programs, a difference statistically significant at well beyond the one percent level.[47] While it is not possible to know what the ratings of the displaced first run programs would have been, this evidence is consistent with the displacement of popular first run programs with less popular off-network programs.

This 25% level of first run displacement outside the top 50 markets is almost certainly substantially less than what would be observed without the off-network provision in the top 50 markets. While first run producers have to cover costs, this doesn't have to be accomplished with equal markups over distribution costs for all licensees. The protection of the off-network provision should allow first run syndicators to demand higher margins above per episode and distribution costs in the top 50 markets, where they don't have to contend with lower margin off-network competition, than in markets below the top 50 where they do. Data in a recent presentation by Paramount comparing their access shows in the top 50 and second 50 markets showed that first run syndicators currently use a combination of higher margins in the top 50 markets and lower margins in other markets to cover costs. If first run producers had to charge lower license fees in the top 50 markets, some of these programs would go off the air, leaving their slots for off-network programs.

The above scenario reflects likely short run adjustments to the elimination of the off-network provision. In the long run the effect on the first run share of affiliate clearances would be much greater because direct competition with off-

[47] This means that there is a less than one chance in one hundred that this large a difference in mean ratings is an artifact of random variation in the data.

network programs in the top 50 markets would reduce the probability of success for new first run programs. With a lower probability of success, current production and development budgets could not be sustained, and first run producers would have to turn to lower cost, less popular alternatives. As first run budgets and ratings fell, affiliates would turn increasingly to off-network alternatives.[48] So both in the short run, and even more so in the long run, elimination of the off-network provision is likely to result in off-network programs displacing more popular first run programs.

Clearly, the substitution of less popular off-network programs for the first run programs viewers like better on the most powerful stations in the largest markets is not in the best interest of viewers. However, it is possible that viewers might end up better off if there is a more than commensurate increase in the audience appeal of programs on independent stations in these markets. Perhaps the best empirical indicator of what might happen to the programming on independent stations is a comparison of current ratings for first run and off-network programs on independent stations in the access period in the top 50 markets. Here we have the most popular off-network programs competing with the types of first run programs that can make a profit with the reduced audiences available on the weaker, mostly UHF, independent stations[49] -- the types of first run programs that independent stations might turn to for replacements if they lost the most popular off-network programs to network affiliates.

A comparison of mean Arbitron ratings for off-network and first run programs run in the access period by independents in markets 1 through 30 in November 1993 showed ratings for the two types of programs to be almost identical and statistically indistinguishable. (The mean ratings for first run and

[48] The most popular among the current first run programs might not be affected because they would still be able to cover per episode and distribution costs. However, as these shows age and decline in popularity, they would either be replaced by lower cost alternatives or not be replaced at all.

[49] UHF stations are weaker in the sense that the same program will draw a smaller audience on a UHF station than on a VHF station. As shown in another section of this report, ratings for Fox programs were substantially lower on UHF stations than on VHF stations.

probably an overestimate of the popularity of the programs independent stations might use to replace top tier off-network programs because, in all likelihood, many of the replacements will be lower rated off-network programs that in current circumstances would not be considered for this time slot.

This comparison of independents' choices in the top 50 markets suggests that viewers are not likely to be compensated for the loss of popular first run programs on network affiliates by the addition of more popular programs on independent stations. Therefore, it is likely that viewers will be net losers if the off-network provision is dropped. This likelihood is illustrated in **Table IV.7** where average ratings are taken as an indirect index of viewer welfare. First run program in our Arbitron data base had an average access period ratings of 10.9 in the top fifty markets, compared to average ratings of 4.6 for off-network program on independent stations in these markets. Our earlier comparison of ratings for first run and off-network programs in the access period if markets 51-60, where affiliates can take either type of program, showed average ratings on affiliates of 12.4 for first run programs and 7.2 for off-network programs. So on average off-network programs generated ratings 58 percent of the ratings for first run programs. Applying the 58 percent figure to first run access period ratings in the top 50 markets would imply the substitution of programs that would otherwise generate 6.3 ratings on affiliates for those that current get ratings of 10.9, if off-network programs completely supplanted first run programs on affiliates. Survival of some of the most popular first run programs would an average rating somewhere between 6.3 and 10.9, although a decline in budgets for first run programs in response to decline prospects for success would lower the top end of this range and bring down the average. **Table IV.7** reflects the assumption that in the long run a mix of off-network programs and surviving first run programs generates ratings seventy-five percent of the current average rating for a first run access period program in these markets.

Table IV.7: The Long Run Loss of Popular Access Period Programs in the Top 50 Markets from the Removal of PTAR	
Average Rating for First Run Programs on Affiliates with PTAR	10.9
Projected Ratings for Off-Network Programs Replacing First Run Programs on Affiliates without PTAR	6.3
Average Ratings of Off-Network Programs on Independents with PTAR	4.6
Average Ratings of Replacement Programs on Independents without PTAR	Less than 4.6

Finally, there is no indication that there would be significant benefits to prime time network viewers to offset the losses to access period viewers just described if PTAR's off-network provision was dropped. A careful analysis of the prices paid for off-network half hours in broadcast syndication shows that there has been no decline in the syndication earnings of these programs (see **Appendix F** for a discussion of off-network episode prices). When the growth of cable as a buyer of off-network programs is factored in, it is likely that the "back end" for these programs has improved. Off-network half hours too weak for broadcast syndication are now frequently picked up by cable networks, and the major cable networks have grown to the point that they are now outbidding broadcasters for popular off-network hour programs, such as "Murder She Wrote." Therefore, there is no reason to believe that prime time network programs are financially threatened.

C. PTAR has stimulated the growth of local advertising.

The FCC's May, 1970, Report and Order enacting PTAR's three-hour and off-network restrictions made it clear that the health and growth of the primarily UHF independent stations was a central consideration of the Rule.

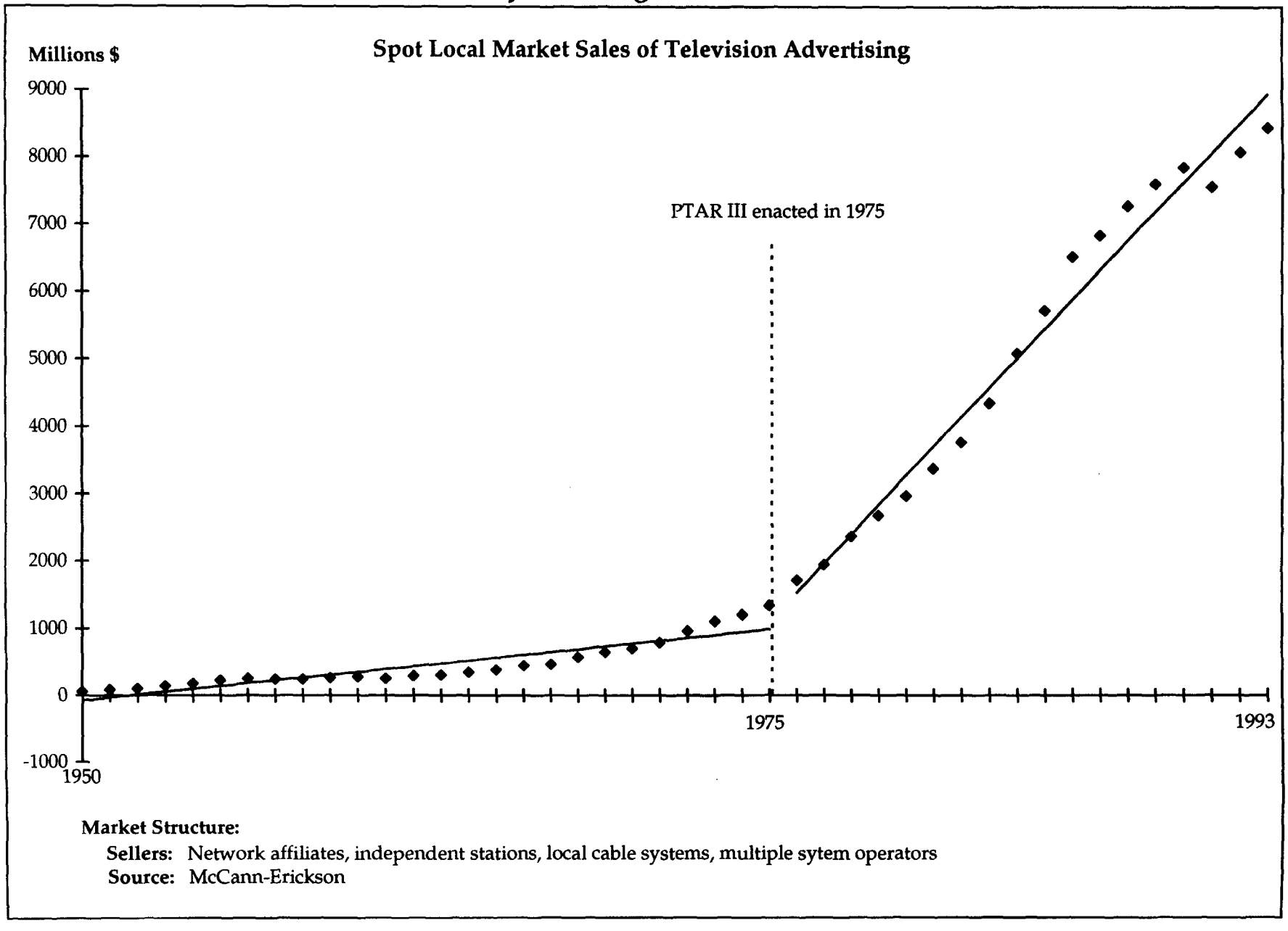
> We believe this modest action will provide a healthy impetus to the development of independent program sources, with concomitant benefits in an increased supply of programs for independent (and, indeed, affiliated) stations. **The entire development of UHF should be benefited.** (23, FCC 2d at 395, paragraph 23, emphasis added)

Quite apart from PTAR's impact on entry by independent syndicators and emerging networks into the national video advertising market, the Rule has had an enormous impact on the growth of local advertising, both by improving the ratings of independent stations during prime time and by adding to the number of independent stations in the long run. In **Figure IV.6** PTAR may be seen to have had a dramatic impact on the market for local advertising in its final regulatory form which came into effect in the fall of 1975. As network affiliates gradually began to run network quality first run programming during the access period, some of that initial growth in local advertising was likely lost to national advertisers, but the PTAR-influenced ratings gains of independents and the associated growth in the number of independents compensated for that shift.

Clearly a large part of this growth in television advertising by local sponsors occurred in the top 50 ADI markets to which the Rule applies. In the largest urban areas, PTAR has fostered local commerce by providing an access period for local and regional sponsors to reach a local prime time audience. At the margin it may be said to have tipped the scales by a small amount in favor of local and regional brands of products and against national brands.

The growth of local advertising expenditures outside the top 50 ADI markets due to PTAR underlies much of the data in **Figure IV.6.** As we earlier indicated, any firm seeking to clear a national audience with television programming must clear many of the top 50 markets to obtain a "critical mass" of viewers before sales below the top 50 have any meaning. With respect to PTAR's three hour restriction, "top 50" has always been a misleading label. The Rule opened up growth possibilities for local advertising in all ADI markets

Television advertising sales in the spot local market increased dramatically following the institution of PTAR.



Market Structure:

Sellers: Network affiliates, independent stations, local cable systems, multiple sytem operators

Source: McCann-Erickson

Figure IV.6

because the networks cleared all markets of the network feed during the access period.

From November of 1971 on, no network programs competed for audiences in any ADI market during the access period. The competition in all ADI markets during the access period is now, in essence, between off-network programs and first-run syndicated programs. Because the Commission's Notice failed to explicitly include the local broadcasting market in its proposed analytic framework, it necessarily precluded from consideration the social benefits from local advertising in all ADI markets arising from PTAR.

A major social cost of repealing PTAR is the potentially substantial impact on the local market for video advertising. National firms purchasing time from the major networks would benefit at the expense of their smaller regional and local competitors. Television networks would benefit at the expense of all television stations in each local ADI market.

V. PTAR Created the Long Run Conditions for Emerging Networks and Repeal will Seriously Imperil that Process

A. Eliminating PTAR Would Hurt Emerging Networks' Profitability Across All of Prime Time, Not Just the Access Period

The econometric results discussed in **Section IV. A.** confirm that the positive ratings impact of PTAR on independent stations during the access period carried over into at least the next hour of prime time. The impact was not as large as the access period impact but is significant. Such carry over is critically important for the success of emerging networks like Fox in being able to enter the national video advertising market. Indeed, the UPN and WB networks initiated their network programming in the critical hours adjacent to the access period. To date UPN is programming two prime time hours a few days a week, both outside of the access period. We can assess the negative impact on emerging networks of eliminating PTAR by analyzing in greater detail what would happen to carry-over ratings without the Rule.

To measure the carry over effect directly requires us to estimate the ratings impact from PTAR for each half hour period considered separately. We began by estimating the ratings of the average independent station for each one-half hour of programming (i.e., the Access Period, Carry-Over Period 1 and Carry-Over Period 2) for the pre-PTAR years (1966-1970); the immediate post PTAR years (1971-1979); and the long run post PTAR years (1987-1993). The results are presented in **Table V.1.** It should be kept in mind that these comparisons of means include the impact of PTAR on carry over ratings, but also include the impact of all other factors. They are a starting point only.

Changes from the pre-PTAR years to the short run post-PTAR years for the average station show a positive carry over effect. The results indicate that average station ratings increased for the access period, for carry-over period 2 and for all three programming periods taken together. The measured increase in ratings for

Table V.1

Average Historical Ratings Measures of Carry-Over; by Prime Time Period

	Pre-PTAR Years 1966-1970	Short-Run Post-PTAR Years 1971-1979	Long-Run Post-PTAR Years 1987-1993
Average Rating per Station			
Access Period	3.559	6.484	3.853
Carry-Over Period 1	3.186	3.058	3.684
Carry-Over Period 2	2.674	2.990	3.667
All Times	3.140	4.177	3.735

carry-over period 2 is significant at the 87% level, while the increases for the access period and all programming periods are significant at the 99% level.[51]

[51] The ratings in carry-over period 1 were not different statistically in the short-run post-PTAR years than they were in the pre-PTAR years. Further, a comparison within the short-run post-PTAR years of the ratings in each of the Programming Periods suggests that the access period ratings (of 6.48) did not carry over well into carry-over Periods 1 and 2. One cannot conclude from this basic comparison of means that PTAR as such had no such carry over effect. To examine PTAR's influence on carry over, one must turn to the regression analysis below.

Changes from the pre-PTAR years to the long run post-PTAR years for the average station show an even stronger carry over effect from the pre-PTAR period. Average station ratings increased post-PTAR for each one-half-hour programming period and all programming periods taken together. The increase in the access period ratings is not statistically significant. However, the increase in carry-over period 1 is significant at the 94% level and the increase in carry-over period 2 is significant at the 99% level. The increase for all programming periods taken together is significant at the 99% level.

A comparison within the long run post-PTAR years of the ratings in each of the programming periods suggest that the access period ratings (of 3.85) did carry over well into carry-over periods 1 and 2. Specifically, the average ratings for each programming period is statistically the same.

Beyond a comparison of means for each carry over period, we can estimate the effect that PTAR alone, isolated from all other factors, had on carry over ratings. The effect of PTAR for each Programming Period is explicitly measured by estimating regression 1 in **Appendix Table D.4** for each Carry-Over Period. We did so and found that the coefficient for "PTAR Dummy" during carry-over period 1 was 0.0032. This implies that the basic effect of PTAR was to raise average station ratings by 0.32 ratings points during carry-over period 1 (8:00 - 8:30 p.m. ETZ).[52]

The estimated coefficient for "PTAR Dummy" during carry-over period 2 was 0.0068, indicating that the basic effect of PTAR was to raise average station ratings by 0.68 ratings points.[53] Hence, the effect during carry-over period 2 (8:30 - 9:00 p.m. ETZ) is positive; greater than the effect measured for carry-over period 1; but less than the effect measured for the access period. Based on 1993 ratings, and averaged over the two carry over periods for all independent stations, this is a 14% increase in ratings.

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[52] This result is significant at the 77% level only. As in footnote 1, this result does not take into account the variation due to time and market size

[53] This effect is significant at the 99% level.